



DETAIL 'A'

SYMBOL	TQ/TQG/HT/HTG100			TQ/TQG/HT/HTG144			TQ/TQG/HT/HTG176		
	MILLIMETERS			MILLIMETERS			MILLIMETERS		
	MIN.	NOM.	MAX.	MIN.	NOM.	MAX.	MIN.	NOM.	MAX.
A	~	~	1.60	~	~	1.60	~	~	1.60
A <sub>1</sub>	0.05	~	0.15	0.05	0.10	0.15	0.05	0.10	0.15
A <sub>2</sub>	1.35	1.40	1.45	1.35	1.40	1.45	1.35	1.40	1.45
D/E	16.00 BSC			22.00 BSC			26.00 BSC		
D <sub>1</sub> /E <sub>1</sub>	14.00 BSC			20.00 BSC			24.00 BSC		
L	0.45	0.60	0.75	0.45	0.60	0.75	0.45	0.60	0.75
e	0.50 BSC			0.50 BSC			0.50 BSC		
b	0.17	0.22	0.27	0.17	0.22	0.27	0.17	0.22	0.27
c	0.09	~	0.20	0.09	~	0.20	0.09	~	0.20
ccc	~	~	0.08	~	~	0.08	~	~	0.08
ddd	~	~	0.08	~	~	0.08	~	~	0.08
N	100			144			176		
REF.	JEDEC MS-026-BED			JEDEC MS-026-BFB			JEDEC MS-026-BGA		

## NOTE:

- ALL DIMENSIONS AND TOLERANCES CONFORM TO ANSI Y14.5-1994
- DIMENSION D<sub>1</sub> AND E<sub>1</sub> DO NOT INCLUDE MOLD PROTRUSION. ALLOWABLE MOLD PROTRUSION SHALL NOT EXCEED 0.25mm PER SIDE.
- PACKAGE TOP DIMENSION MAY BE SMALLER THAN THE BOTTOM DIMENSION BY 0.15mm.
- THE SAME PACKAGE DIMENSIONS APPLY FOR THERMALLY ENHANCED PRODUCTS. HEAT SINK IS ADDED. THE PACKAGE CODE IS "HT". HEAT SINK DIMENSIONS: HT100=10.0mm SQ. REF. HT144=15.5mm SQ. REF. HT176=19.4mm SQ. REF.
- MARK ORIENTATION WITH RESPECT TO PIN-1 I.D. IF 2 OR MORE CIRCLES EXIST ON TOP OF THE PACKAGE, USE THE SMALLEST CIRCLE AS PIN-1 I.D.

100, 144, and 176-PIN TQFP (TQ100/TQG100, TQ144/TQG144, and TQ176/TQG176)  
 100, 144, and 176-PIN HEAT SINK TQFP (HT100/HTG100, HT144/HTG144, and HT176/HTG176)